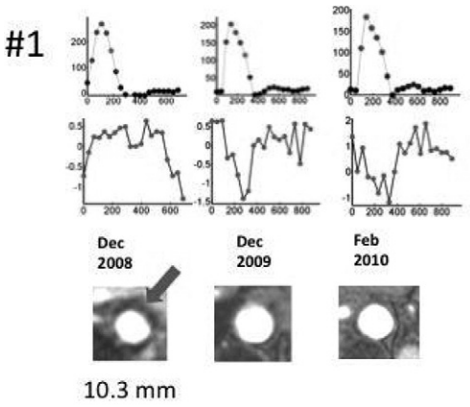

Case	CC flow (p-Value)	thickness [mm]	dmin [mm]	dmax [mm]
#1/In	0.21 (0.2)	10.3	-0.9	4.6
#1/FU1	-0.40 (0.08)	0	-2.5	2.4
#1/FU 2	-0.50 (0.02)	0	-3.1	5.0
#2/In	0.54 (0.01)	10	-0.8	0.5
#2/FU	0.73 (1e-4)	3.6	-2.8	1.1
#3/In	0.87 (1e-4)	13.1	-1.3	1.7
#3/FU	0.61 (1e-3)	10	-2.9	1.1

Aortic flow waveforms (first row, in ml/sec) and average wall motion (second row, in mm) together with axial cross section of aorta and IMH (third row) for IMH patient #1. Arrows denote location where thickness measurement was taken. Number in figure is thickness of IMH. Table presents wall compliance (CC: absolute correlation coefficient with aortic flow waveform, IMH thickness, maximum contraction and maximum extension).

PS24.

Risk Factors for Non-Procedure Related Mortality One Year after Thoracic Endovascular Aortic Repair

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Objectives: Thoracic endovascular aortic repair (TEVAR), although physiologically well tolerated, may fail to confer significant survival benefit in some high-risk patients. This study sought to determine risk factors for one-year non-procedure related mortality after TEVAR.

Methods: A single-institution, prospective cohort review was performed of all patients undergoing TEVAR between 5/2002-12/2010. Univariate analysis and multivariable Cox proportional hazards regression were used to identify risk factors associated with one-year non-operative mortality (NOM), defined as death between post-operative day (POD) 31 and 365. For patients with multiple procedures, the index procedure was used for survival analysis.

Results: 282 patients underwent at least one TEVAR procedure during the study interval; index procedures included descending (n=189), hybrid arch (n=55), and hybrid thoracoabdominal repair (n=38). Mean follow-up was 24±20 months and 100% complete. 30-day/in hospital mortality was 7.4% and one-year NOM was 11.7%. The most common cause of death between POD 31-365 was cardiopulmonary (n=12/33 [36%] late deaths). Univariate predictors of one-year NOM were ASA class (P<0.001), BMI (P=0.004), aortic diameter (P=0.005), weight (P=0.005), race (P=0.011), history of stroke (P=0.014), age (P=0.019), and peripheral vascular disease (P=0.032). Multivariable modeling (Table 1) demonstrated six independent predictors of one-year NOM, with these variables explaining the majority of risk (C statistic=0.83).

Conclusions: ASA Class 4, white race, male sex, decreased weight, history of stroke, and increased aortic diameter independently predict one-year NOM after TEVAR. These clinical characteristics may help identify patients unlikely to derive long-term survival benefit from TEVAR.

Table 1.

Variable	*Living Group (n = 228)*	*POD 31-1yr Mortality Group (n = 33)*	*Hazard Ratio [95% Confidence Interval]*	*P*
ASA Class (4)	96 (47%)	24 (73%)	3.56 [1.43-8.88]	0.007
Race (white)	142 (62%)	28 (85%)	3.84 [1.44-10.22]	0.007
Sex (male)	131 (57%)	24 (73%)	3.10 [1.30-7.36]	0.010
History of Stroke	20 (9%)	8 (24%)	2.85 [1.24-6.55]	0.014
Weight (kg)	83 ± 19	73 ± 10	0.97 [0.94-0.99]	0.014
Aortic Diameter (cm)	5.52 ± 1.63	6.43 ± 1.92	1.27 [1.03-1.56]	0.023

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C3b: Poster Session - Aortic Disease (2)

PS26.

Long Term Quality of Life after Endovascular Aneurysm Repair, Compared to Open Repair in Patients with Abdominal Aortic Aneurysms

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Objectives: Although patients undergoing endovascular treatment (EVAR) of their abdominal aortic aneurysm have a better survival and quality of life (QoL) in the first month after surgery, it has been thought that in patients who survive this first month, there is a difference in long term QoL between those who underwent an EVAR and those who received open repair (OR). This assumption was based on the fact that EVAR patients undergo an extensive